

**ABSTRACT**

- A transition test on an engine is conducted by simulation using a simulation model of the engine, and a transition test on an actual engine is conducted using the control value.
- 5 In the actual engine transition test, alteration of the control value by an ECU is efficiently carried out thereby to shorten the time required for the actual machine transition test. For the unaltered control value, the output from the actual ECU is used as it is. The output about the other control value is masked. Only for the examined and altered control value, the output from a virtual ECU is used to conduct the transition test.